

55. The purified polynucleotide of claim 54, wherein said polynucleotide is produced by recombinant techniques.

56. The purified polynucleotide of claim 54, wherein said polynucleotide is produced by synthetic techniques.

See E28
D1 57. An isolated and purified polynucleotide selected from the group consisting of:

SEQ ID NO:1, position 4-269 of SEQ ID NO:2, position 10-214 of SEQ ID NO:3, position 1-276 of SEQ ID NO:4, position 1-276 of SEQ ID NO:5 and degenerate codon equivalents thereof.

58. The purified polynucleotide of claim 57, wherein said polynucleotide is produced by recombinant techniques.

59. The purified polynucleotide of claim 57, wherein said polynucleotide is produced by synthetic techniques.

60. A recombinant expression system comprising:
a nucleic acid sequence that includes an open reading frame operably linked to a control sequence compatible with a desired host, the nucleic acid sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, and degenerate codon equivalents thereof.

61. A cell transfected with the recombinant expression system of claim 60.

See E29
62. A recombinant expression system comprising:
a nucleic acid sequence that includes an open reading frame operably linked to a control sequence compatible with a desired host, the nucleic acid sequence selected from the group consisting of SEQ ID NO:1, position 4-269 of SEQ ID NO:2, SEQ ID NO:3,

position 1-276 of SEQ ID NO:4, position 1-276 of SEQ ID NO:5, and degenerate codon equivalents thereof.

63. A cell transfected with the recombinant expression system of claim 62.

64. A method for producing a polypeptide, the method comprising the step of:

incubating host cells that have been transfected with an expression vector containing a polynucleotide sequence encoding a polypeptide, wherein the polypeptide is selected from the group consisting of amino acids 1-55 of SEQ ID NO:12, SEQ ID NO:13 and SEQ ID NO:14.

65. A composition of matter comprising a purified polynucleotide selected from the group consisting of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5 and degenerate codon equivalents thereof.

66. A composition of matter comprising a purified polynucleotide selected from the group consisting of SEQ ID NO:1, position 4-269 of SEQ ID NO:2, SEQ ID NO:3, position 1-276 of SEQ ID NO:4, position 1-276 of SEQ ID NO:5 and degenerate codon equivalents thereof.

67. An isolated and purified polypeptide selected from the group consisting of: amino acids 1-55 of SEQ ID NO:12, SEQ. ID NO:13 and SEQ ID NO:14.

68. A composition of matter comprising a purified polypeptide selected from the group consisting of amino acids 1-55 of SEQ ID NO:12, SEQ ID NO:13 and SEQ ID NO:14.

REMARKS

Reconsideration of the above-identified application in view of the foregoing amendments and following arguments is respectfully requested.